

## THE CURIOUS CASE OF LOCATIVES

Surprise workshop in honor of David Pesetsky's 60th birthday. MIT, February 11, 2017

### 1. THE PUZZLE OF RESTRICTED LOCATIVE CASES

Latin: names of towns, cities, small islands and a few common nouns including *domus/domi* 'home', *rus/ruri* 'countryside' and *humus/humi* 'ground' have locative (essive) case.

- (1) a. *iacēre humi* Gildersleeve and Lodge 1876:266  
 lie.INF ground.LOC  
*to lie on the ground*
- b. *Militēs Albae cōstitērunt in urbe opportūnā.*  
 soldiers Alba.LOC halted in city.ABL convenient.ABL  
*The soldiers halted at Alba, a conveniently situated town.*

Cannot be a morphological restriction on the distribution of the locative case suffix (which is syncretic with other cells in the paradigm anyway): exactly the same set of lexical items uses bare **accusative** case-marking **for allative** and bare **ablative** case-marking **for the source**:

- (2) a. *Missī lēgātī Athēnās sunt.* Gildersleeve and Lodge 1876:214  
 sent.PL envoys Athens.ACC are  
*Envoys were sent to Athens.*
- b. *Innumerābilēs (philosophī) numquam domum revertērunt.*  
 innumerable philosophers never home.ACC returned  
*Innumerable philosophers never returned home*
- (3) a. *(Verrēs) omnia domō ēius abstulit.* Gildersleeve and Lodge 1876:249  
 Verres everything house.ABL his took.away  
*Verres took everything away from his house.*
- b. *Dolābella Dēlō proficīscitur.* Gildersleeve and Lodge 1876:251  
 Dolabella Delos.ABL depart  
*Dolabella sets out from Delos.*

The null preposition hypothesis would require the preposition to l-select its complement

It turns out that locative cases frequently have restricted distribution:

- (4) a. locative case restricted to toponyms and/or some common nouns (T&sCN) Latin; Biblical Hebrew locative *he*: Hoftijzer 1981, Waltke and O'Connor 1990, Arnold and Choi 2003, Medill 2013, etc., remnants in Modern Hebrew; Maltese: Borg 1987-1988; Itzaj Maya: Hofling 2000:219; Dutch Russian, English: D + *dom* 'home', French: locative clitics
- b. locative case-marking optional or absent for T&sCN Biblical Hebrew: Waltke and O'Connor 1990; Tswana: Creissels 2009; Western Armenian: Guekguezian 2011; Yimas: Foley 1991:165, 170-171; Gurr-goni: Green 1995:35
- c. special locative case forms for T&sCN Hungarian (a handful of toponyms and a few common nouns): Rounds 2001:118; Agul, Archi, Avar, Lezgian, etc.: Daniel and Ganenkov 2009; Basque
- d. locative cases & genitive only for T&sCN Bagvalal: Daniel and Ganenkov 2009, Diyari: Austin 2013:52

Semantic solution: some toponyms and common nouns can denote **loci rather than entities**

## 2. LATIN RESTRICTED LOCATIVE AS A LOCUS

Many different technical approaches to the semantics of spatial prepositions (Bierwisch 1988, Wunderlich 1991, Zwarts and Winter 2000, Kracht 2002, Bateman, Hois, Ross and Tenbrink 2010, etc.). All agree: **spatial prepositions operate with loci** (regions, sets of points, sets of vectors, etc.)

Core intuition: if an NP already denotes a locus, the (locative) preposition is not necessary

**Restricted locatives in Latin denote loci**, which is why they do not need a preposition

Natural explanation for **the allative accusative** and **the bare ablative** for the source: Path<sup>o</sup> in the general phenomenon of directional/locative case alternation (Bierwisch 1988, den Dikken 2003, 2010, Zwarts 2005, 2006, Lestrade 2006, 2010, Caha 2010):

- (5) a. *Multos annos Gallia sub imperio Romano fuit.* locative  
many years Gaul under rule.LOC Roman.LOC be.PRET  
*For many years Gaul was under Roman rule.*
- b. *Sub imperium Romanum Gallia cecidit.* directional  
under rule.ACC Roman.ACC Gaul fall.PRET  
*Gaul fell under the Roman rule.*

Reasonable assumption: the accusative of direction results from the presence of an additional functional head Path (Koopman 2000, Zwarts 2005, Svenonius 2008, 2010, den Dikken 2010, etc.) or from [motion] on M (Radkevich 2010) for both bare and prepositional locatives

## 3. CROSS-LINGUISTIC IMPLICATIONS OF LOCUS-DENOTING NPs

The availability of locus denotation explains **locative pronouns and demonstratives** (*there*)

No need to assume complex internal structure if they denote loci (cf. the French *en* and *y*)

Assuming that some NPs can denote loci explains the cross-linguistic restrictions on locative cases on the assumption that **locative cases can have different functions across languages**:

- (6) a. locative case-marking restricted to T&sCN only these denote loci (as in Latin)
- b. locative case-marking optional or absent for T&sCN only these T&sCN denote loci; for all others locative case-marking indicates the presence of a null preposition that assigns it
- c. special locative case forms for T&sCN only these T&sCN denote loci, as in (4/6a). For all others the default locative case results from the presence of a null preposition, as in (4/6b)
- d. locative cases & genitive only for T&sCN these denote loci only with no corresponding entity-correlates (the morpheme for EIGEN<sup>+</sup> is not available)

The complementary case-marking in languages like (4a) vs. (4b) shows that the locative-case label cannot correspond to the same structure across languages

Creary, Gawron and Nerbonne 1989 (building on Jackendoff 1983, cf. Larson 1987): just as NP arguments can be pronominalized, quantified over and give rise to ACD, so can locatives:

- (7) a. Bill sang **everywhere** Mary sang/did.  
b. Al lives *on the Ohio*, and Ed works **there**.

Bonus: the appositive genitive (*the city of New York*) explained, diachronically at least

Extra bonus: bare NP-adverbials (e.g., *Monday*) may be temporal loci

#### 4. THE SOURCE OF LOCATIVE AND THE NATURE OF CASE

Case (informal definition): **nominal morphology reflecting the environment of the NP**

Marantz 1991:

- lexical (assigned by a particular head, e.g., quirky or adpositional)
- dependent (accusative and ergative, cf. Baker and Vinokurova 2010 et seq.)
- unmarked (nominative and absolutive in a clause, genitive in an NP)
- default (realization of the lack of case)

Standard formalization: **dedicated case features**

- unintuitive: how does [accusative] correlate with v? Why should it?
- non-morphological: how does syncretism work?
- non-universal: how can [accusative] differ in English and in Russian?
- too categorical: how can there be several variants of [genitive] in one language?

Alternative: **case as a reflection of other features**

Pesetsky and Torrego 2001 (see also Williams 1994, Haerberli 1999): nominative is T (i.e., **there is no feature [nominative], there is [uT]**)

Pesetsky and Torrego 2004 (see also Kratzer 1996, Torrego 2002, Travis 2010): accusative is v ([uT] on v<sup>0</sup>)

Bailyn 2004: genitive is Q

Pesetsky 2013: **genitive is [uN], nominative is [uD], accusative is [uV]**

Matushansky 2008, 2010, 2012: predicate case as a complex of features including [uPred]

Two potential sources for the locative case: a reflection of the **internal semantics** ([i*locus*], like the feminine gender on *mother*) or assignment by a **functional head** ([uF]: which F?)

##### 4.1. Locative as a reflex of an interpretable feature

Case-assignment and its overt realization can be **conditional on interpretable features** (e.g., differential object and subject marking; accusative syncretism for inanimates, etc.)

The locative case morphology can be analyzed as the realization of the interpretable feature [locus]. In which case locative is arguably **a case that is not assigned**

Advantages of this view: no null functional heads, cf. inherent cases (Woolford 2001, 2006)

Disadvantage: case is not uniformly assigned from the outside

##### 4.2. A null functional head in locatives

As prepositions express relations between loci, we minimally need the semantic **type for loci** and a function to **map an entity to its locus**

Wunderlich 1991: the *eigenspace* of an entity is the region that it occupies (obtained by the application of the primitive function EIGEN)

A preposition applies to a locus (e.g., a set of points) and returns another locus

(8)      the TV                  EIGEN ([[the TV]])                  *above* (EIGEN ([[the TV]]))



This is obviously a simplification, as much more syntactic and semantic complexity has been proposed for PPs (Zwarts and Winter 2000: vector spaces; Koopman 2000, Zwarts 2005, den Dikken 2010: Path; Svenonius 2008, 2010: Deg and K; Radkevich 2010: M, etc.)

Open question: does **EIGEN have a structural representation?** (Svenonius 2008, 2010: K)

Locative PPs can function as modifiers of entities (NP-internally) or events (VP-internally):

- (9) a. a house in New York  
 b. to live/walk in New York

For the former case, direct composition is impossible; **must shift from a locus** (however it is defined) **to a set of entities** (type  $\langle e, t \rangle$ ). A very reasonable assumption for the latter case as well

Hence  $\text{EIGEN}^-$ : maps a locus to the set of entities (type  $\langle e, t \rangle$ ) that are located at this locus:

- (10)  $\text{EIGEN}^- =_{\text{def}} \lambda l . \lambda x . \text{EIGEN} (x) \subseteq l$                        $\text{EIGEN}^- (\textit{above} (\text{EIGEN} (\text{the TV})))$



$\text{EIGEN}^-$  **cannot be a lexical part of spatial prepositions**, since spatial PPs can be augmented by directional prepositions and modified:

- (11) a. **[[six feet] [behind the house]]**  
 b. **[from [under the bed]]**

The measure phrase and the directional preposition do not combine with something of the type  $\langle e, t \rangle$

Which means that the transition to the predicate type happens at a higher level and can be accomplished by a functional head (the  $p^\circ$  of Svenonius 2003, cf. Kratzer 1996 for  $v^\circ$ )

Svenonius 2003: the case assigned to the Ground is assigned by  $p^\circ + P^\circ$  (or  $p^\circ$  alone), cf.  $v^\circ$

Individual Ps can assign **quirky cases**. If not,  $p^\circ$  accounts for the **default prepositional case** (cf. Haselbach and Pitteroff 2015)

Reconciliation with the decomposition in Kracht 2002 and Radkevich 2010: directional PPs do not comprise the totality of locative tree (because directionals do not need to include the pP, a different mode of composition is expected)

## 5. CONCLUSION AND FURTHER QUESTIONS

A set of cross-linguistic generalizations about restrictions on preposition-less locative case argues for adopting locus denotations for some terminals in some languages

As our ontology at any rate requires loci, it is unsurprising that there should be terminals that denote loci

Loci naturally have entity-correlates:

- (12)  $\text{EIGEN}^+$ : maps a locus to the unique entity located at this locus  
 $\lambda l . \iota x . \text{EIGEN} (x) = l$

Two points of variation:

- whether a language has locus-denoting nouns at all
- whether each given locative case (form) indicates the presence of more structure (when corresponding to a hidden preposition) or less (when corresponding to the default case-marking on lexical loci)

(Potential) extensions:

- Matushansky 2016: French locative “prepositions” (the famous *en/au* alternation, cf. Cornulier 1972, Zwicky 1987, Miller, Pullum and Zwicky 1997)
- attested locative case syncretisms (Radkevich 2010): only directional/locative and ablative/locative (in Nivkh and Veps)
- the effect of modification (restrictive vs. non-restrictive)
- unmarked definite locatives (Rapa Nui (Kieviet 2017), Modern Greek (Ioannidou and Dikken 2009, Terzi 2010, Gehrke and Lekakou 2012), Western Armenian)
- weak definites (*to school, to the hospital*, cf. Carlson and Sussman 2005, Aguilar Guevara and Zwarts 2010, 2013, Aguilar Guevara 2014, etc.)
- Russian close apposition with toponyms (Matushansky 2013, in progress)
- temporal loci (e.g., *Monday, next week*)
- connection between  $p^\circ$  and  $\text{Pred}^\circ$

The issue of multiple case-assignment and multiple case-marking: **which case wins?**

- unresolved (everything wins): Merchant 2006, Richards 2007
- outermost: Béjar and Massam 1999, Caha 2007, Pesetsky 2013
- morphological resolution: Brattico 2011, Matushansky 2008, 2010, 2012

**Decompositional** (Jakobsonian) approach to case + the reflexive nature of case features

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